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Washington Highlights

One of the last acts of Congress at the session just concluded was to pass the Interior Appropriation bill. It carries $100,000 for the unifying, coordinating and other business of the Interior Department's oil and gas division. The measure additionally provided $175,000 for enforcement of the Connally "hot oil act" during the year ended next June 30.

Commenting on the appropriation for the oil and gas agency, Walter S. Hallanan, chairman of the National Petroleum Council, said it is gratifying to the petroleum industry that Congress has recognized the necessity for industry-government cooperation in meeting the many serious problems that now face us.

"The approval," he went on, "of the appropriation for the maintenance of the oil and gas division by the joint conference committee of the House of Representatives and Senate shows that there has been full recognition of the merits of this undertaking. With the many acute problems facing the industry in doing an all-out job for the protection of our national security it gives encouragement to the industry, in the effort it is putting forth through the National Petroleum Council, to provide full cooperation in solving problems closely associated with the public's welfare.

"While the appropriation is not sufficiently large enough to provide an adequate staff it will provide a clearing house for continued cooperation between the industry and agencies of the Government."

The Senate National Resources Economic Subcommittee of the Public Lands Committee may undertake further hearings on the evident tightness of oil and gas supplies in the United States during the Congressional recess.

Senator George W. Malone, (Republican), Nevada, committee chairman, has been gathering all facts possible dealing with the alleged shortages. Already called and heard from have been leading representatives of the producing, refining and distributing branches of the American petroleum industry.

Secretary of War Royall has made known that the War Department plans to keep 60 complete Government-owned industrial plants ready for instant specialized production in the case of another war. Worth of the 60 plants is placed at $2,301,000,000. Although they would cost approximately $25,122,000 to maintain, Royall explained this amount may be sharply reduced if the plants are leased out for use in civilian pursuits.

Short supplies of aviation gasoline for the armed forces are of increasing concern to military authorities.

A report of the American Petroleum Institute indicated that aviation gasoline will be more in demand than ever in the months ahead.

Fully cognizant of the situation, an Army spokesman called upon the petroleum industry to allocate a specific percentage of aviation fuel to the armed forces in the interest of national defense.

He pointed out that a number of large refiners of aircraft gasoline during the war are now manufacturing none and that other major producers are setting aside bids for the military services in favor of domestic and export trade.

California's petition, calling for a rehearing of the tideland case, in substance sets forth that nothing but the "unsupported declaration of the majority of this court sustains Federal claim." It also advanced that "if the National Government needs real or personal property in order to carry out its functions it must acquire that property in a constitutional manner."

Incidentally, the Army-Navy Petroleum Board is showing undisguised opposition to any policy of the Justice Department which would not allow continuation of full development of the oil-rich offshore lands. Any deviation in the normal production course of the tidelands is seen by the board as endangering defense of the country.

At least two groups of independent oil companies are exploring the possibilities of participating in Middle Eastern oil development. Entrance of independents to this field of operations would have the blessing of the State Department, which has long believed a move of this kind would reinforce the country's position there.

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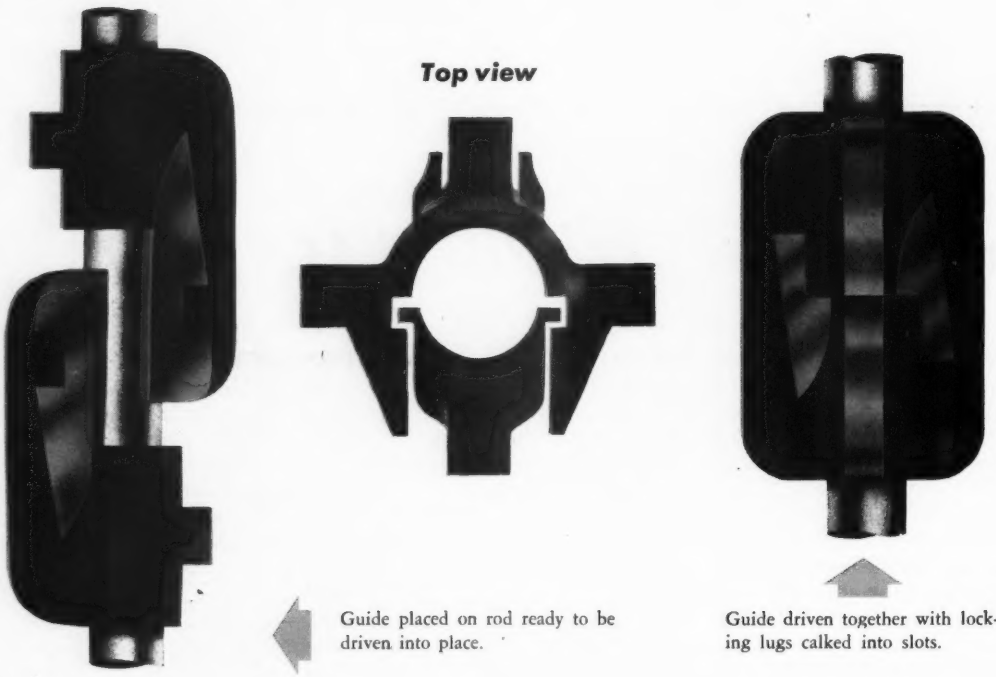

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Jerry Graham, Mgr.

Trends and Techniques in Petroleum Exploration

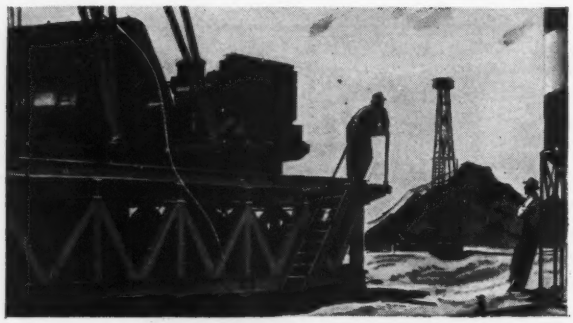
Petroleum technique processes, and equipment have been changing so rapidly in recent years, and each specific phase of the business has been so broadened in scope by scientific research and development, that it is almost impossible for any individual to grasp the full significance of events. The best any of us can do, indeed, is to make a superficial evaluation of general trends, and then come back for a more complete consideration of departmental progress. It doesn't make much difference where this departmental survey begins, the result is the same. Inevitably and quickly one is driven to the conclusion that the petroleum industry is undergoing an amazing metamorphoses, a change of tremendous importance. It is growing more vigorous, more daring, and more progressive every day. In effect, what is happening is that coincidental with the discovery of new applications for petroleum and its products, new methods and machines, we are striving, and with gratifying success, to remove the last vestige of uncertainty from every industry practice, and increase the precision of every industry measure.

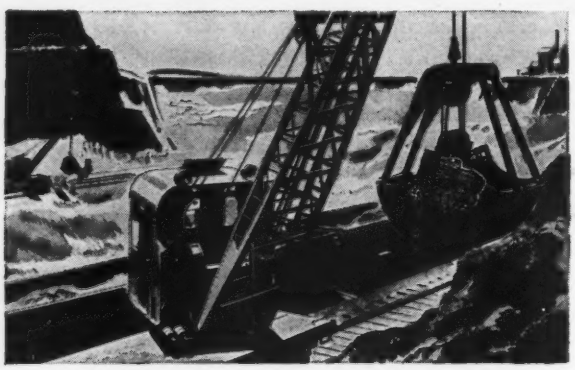
Once not so long ago, chemists and physicists were looked upon with, if not a scathing disregard, then a very decided skepticism, by the oldtime operators. Many stories were told in the doghouses and change rooms about the young college men, with their slide rules and their serious demeanors, who thought they were going to set everything right. The story of the well known geologist who said he would drink all the oil that was produced from Signal Hill; the construction boss who set up the rig where it fell off the truck, thus selecting what turned out to be a better producing location than the one advised by the geologists; the exasperated stillman who finally threw an interfering chemist into some boiling oil, and offered as proof of the latter's low quality, the fact that this act dropped the gravity of the oil 15°A.P.I., are all examples of this effort to depreciate the technical man. Today, of course, that sort of thing is no longer carried on. The scientific brigade has found its place in the sun—more correctly perhaps, has **made** its place in the sun, for unquestionably we are now into the superscientific era of petroleum operation.

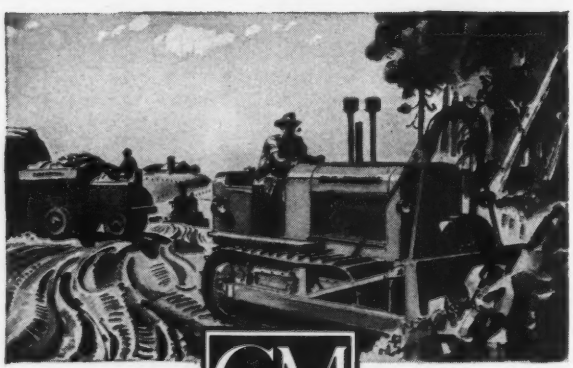
Before we had come quite so far along the modernistic trail, a little research laboratory behind the office or warehouse, manned by a single chemist, was regarded as the mark of a highly progressive organization. Now, the large companies have a dozen research laboratories, peopled with youthful Ph. D's—almost as many girls as boys in some instances, and representing the cream of university crops in physics, chemistry, electronics, electrical engineering, and almost any other kind of engineering or science you care to name. Every one of the laboratories is devoted to some specialized aspect of petroleum operation, and if you are one of the old timers who still cling feebly to the belief that the young scientists are just babes in the petrolic woods, get it out of your system, for these are the folk who are transforming the oil industry from a mere purveyor of oil and gas, into a tremendous organized force that influences almost every known industrial enterprise, makes the United States a nation to cultivate, not to offend, and makes life more convenient and more comfortable for practically every living being on the entire earth's surface.

That sounds a bit bombastic but it is true nevertheless, and in passing, it might be remarked, that the researchers are not accomplishing all this advance by poring over test tubes in laboratories. No sir, to a sizable extent, they have abandoned their benches, and are now to be found in overalls out in the fields, helping the petroleum engineers with mud problems, cementing jobs, and similarly important operational procedures. Some spend their time in association with engineers and technicians from the equipment manufacturing concerns, helping to develop new tools for the better performance of drilling and producing ventures. Still others are engaged in field investigations on a commercial scale of such matters as second-

Much of the advance in aerial photography must be credited to the armies and navies of the allied nations. Here, camera which will take exposure automatically is being loaded on a plane.







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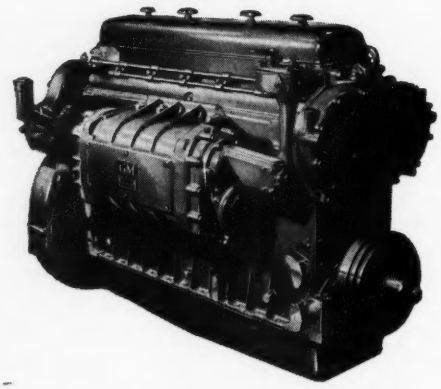

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ary recovery, recycling, directional and vertical drilling, and the multitude of processes and systems that concern petroleum operations. In between the laboratory and the field or plant, are the pilot plants, in which laboratory discoveries and inventions are advanced a big step closer to the ultimate practical stage of development.

It would be foolish to attempt in a single article to comment on all the pertinent factors that have influenced industry trend in recent times, and it is merely hoped that in a series of studies, attention can be drawn to some of the more outstanding events in an intensely interesting period of growth. The natural starting place for such a presentation is, of course, with the origin of petroleum, particularly since Dr. Claude Zobell and his associates, both at La Jolla, California, and Bradford, Pennsylvania, have produced important data on the subject. Dr. Zobell has disclosed the fact that certain types of bacteria have been found, alive and capable of propagation, at depths of at least 1560 feet, and has further found that these bacteria, or at least certain of them, have the capacity under reducing conditions to break down organic substances, such as marine animal and vegetable sediments, into other substances closely resembling petroleum.

Dr. Zobell, however, is a research micro-biologist, and, like the rest of his scientific brethren, is much too cautious to advance all this as proof that petroleum is formed by the action of anerobic bacteria on sapropel, which is the technical name for the marine sediments already mentioned. Here's what he does say: "The occurrence of bacteria in the sediments, which are potentially capable of such transformations, is highly significant." That is about as conclusive as a scientist ever permits himself to become, and indicates that while he will make no claim to having discovered the mechanism of oil synthesis in the sand, he is at least rather sure that he has found one means by which it **may** be brought about. In any case, that is the latest word on the origin of petroleum, and there we intend to leave the matter until something else of consequence develops.

In the field of exploration, investigation has been greatly spurred by the rapidly increasing demand for crude oil and its products, and by the fact that new reserves are not being discovered fast enough, or in sufficient quantity to replace withdrawals. Thus, a once decidedly haphazard adventure, the process of oil finding has today become as scientific as it could well be. From the lowly divining rod and the doodle bugs have evolved an array of precision instruments that literally peer into the interior of the earth, and bring us much interesting data relating to the forces and phenomena that are involved in oil deposition and reservoir flow. It is true that there is as yet no positive method of identifying subsurface oil **in situ** from the surface of the earth, but certainly we are coming closer to that desirable goal every minute, and there is no doubt that in the meantime we are greatly improving known methods, and greatly expanding their use. From an exploration viewpoint, we can now analyze areas formerly inaccessible to us, by using the proper instruments and airplanes to carry them. Similarly we can explore the lands lying under the ocean, or we may resort to the use of diving bells or ships, with special equipment, to cope with unusual conditions.

To supplement automatic photographs taken from the reconnaissance plane, the geologist may find it advantageous to carry a hand operated camera for special shots.

Among the many instruments that have been designed to facilitate and expedite the search for new oil deposits are the torsion balance and the gravity meter. These were based on the fact that oil usually gathers in anticlines, or traps of various sorts, caused by the upfolding or other movement of the earth, and it was known that such conformations include parallel strata of

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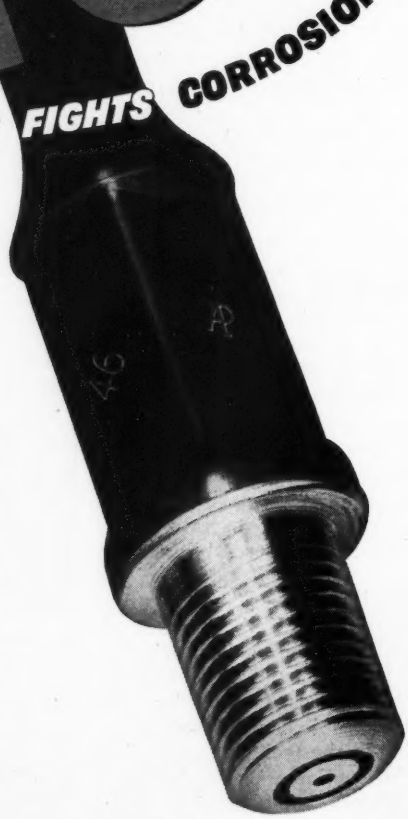

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solid rock. Obviously an instrument such as those mentioned, if sufficiently accurate to record very fine differences in gravity pull, and rugged enough to withstand comparatively rough handling in the field, would show changes in the depth of these rock layers, by plus or minus differences in gravity pull. Such instruments were of great value to the geologist, because with them he could take many readings of the strength and direction of gravity pull over considerable areas, and by plotting the results, that is, joining points of like gravity pull, he could make a gravitational contour map rather quickly that would give him a pretty good idea of the contour of sub-surface formations.

Another instrument that has been of help in a somewhat similar way is the magnetometer, which instead of measuring direction of pull and comparative strength of pull, arrives at the same conclusion by reacting to the magnetism of the base rocks. With this instrument, readings are taken and plotted as before, to arrive at the type of underground stratification that exists in the area. There is no need here to describe the reflection seismograph, perhaps the greatest of all exploration aids, and its salutary effect on the entire exploration picture. Suffice it to say that this device, by means of a series of microphones, picks up artificially created shock waves, which have been bounced back or reflected from basement rock. It records these reflections and the time it takes them to return to the surface, and the geophysicist has so thoroughly correlated results with known data that the reflection seismograph is now one of the exploration department's most valuable tools.

Some of the exploration equipment is very closely related to radar and other army and navy devices, that during the war period they were tremendously developed by Technical Service, although for altogether different purposes. One such is the airborne magnetometer, a very sensitive piece of apparatus that is usually towed on the end of a cable, dangling from an airplane. It picks up and records variations in the magnetic intensity of basement rock, and since such variations are largely due to differences in depth, it again becomes a simple matter to draw a contour map from the data obtained. While the recordings are being taken, a series of photographs of the surface are being simultaneously and automatically secured. With this and the subsurface record, the geologist is well equipped to do some orderly selecting of areas for more detailed exploration.

The airborne magnetometer is equally effective when used over water, and provides surveys of lakes and ocean waters. However, since water surfaces look pretty much alike, surface photographs are of little value for correlation, and in this case the magnetometer readings are amplified by radar plots to mark their relationship to the surface.

Reservoirists and other obscure mathematical geniuses long ago established formulas, through which, given certain information with regard to the flow of a completed well, bottom hole pressure, permeability, and other pertinent measurements, they could determine with reasonable accuracy, the proper way to produce the well in order to secure the maximum eventual production. As might be guessed the resolution of these formulas was a long, tedious mathematical procedure. To relieve the geologist of any further strain of this type, there has been developed a sort of robot, into which one merely needs to feed the basic data, and out come the answers to all the involved problems. This astonishing machine, known as an oil pool analyser, works electrically, and actually calculates without difficulty, the prospective life of the field, and how it must be produced to contrive the greatest economy. Its reliability has been tested by giving it the preliminary dope on a already depleted fields and checking the results of its electrical cogitations against what really happened. The gadget was found to know whereof it speaks!

The flying geologist is no longer an oddity. He is now a distinctly essential part of the exploration scheme, and aero-geology is a firmly established science that is more like-

Through the stereoscope this photo becomes a three dimensional view of the territory, from which the experienced interpreter may deduce the general geological pattern.

Following examination by stereoscope, and taking into account such other relevant data as he may have, the geologist outlines any significant structures that may appear.

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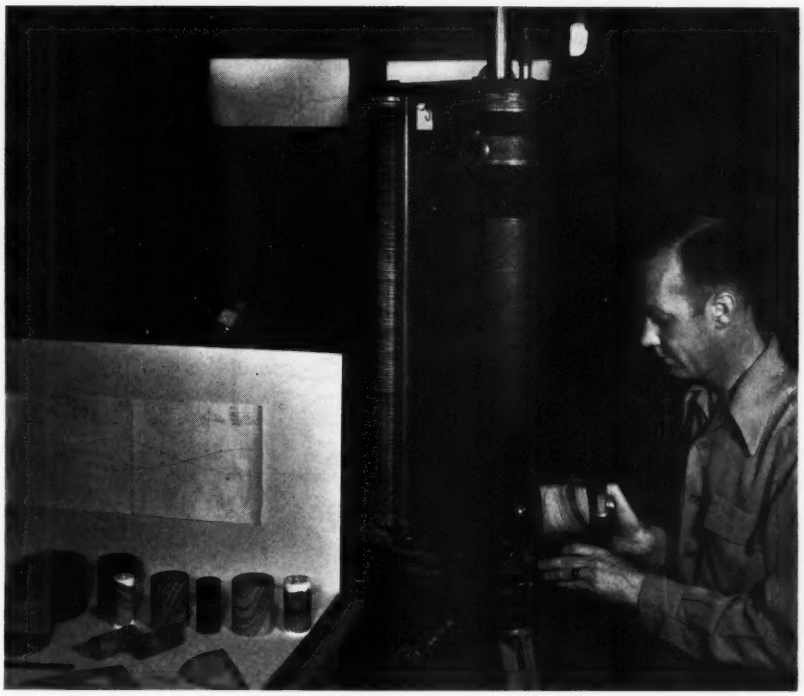
ly to expand than to shrink in the years ahead. The process of aerial mapping, and final interpretation, has also been greatly progressed by wartime experiments of the armies and navies of the allied nations. One of the especially interesting developments of this research was the adaptation of the stereopticon to a useful scientific purpose. From this oldtime plaything that gave us so much pleasure when we were kids, has come an instrument, the stereoscope, under which aerial photographs become three dimensional. In other words, besides showing the length and breadth of the land, they also show depth. Mountains, hills, trees, and every rising nodule or projection on the earth's surface takes on a depth dimension that is not to be found in ordinary photographic views, and that is of consequence in the evaluation of any territory as an oil producing prospect.

Aerial photography has played an important part in petroleum exploration for years, but it is the refinements and adaptations that are making it now such an indispensable adjunct to the exploration sciences. This is particularly true, since the domestic scarcity of new reserves is driving oil companies into foreign fields, many of which are extremely rugged and quite inaccessible to any other means of transportation but flying. In some such ventures, too, involved territories are so vast that geophysical crews working on the ground would take an endless time to complete surveys, even if there were roads available, which in many cases there are not.

It has been pointed out by experts in this business that to one experienced in the art of aerial photography, so much is revealed in the aerial print that, allowing for the distortion effect, the photographs are actually three dimensional models of the country under examination, and as such, when properly interpreted, are more accurate than the ordinary species of topographical map. Moreover, the flying geologist in time becomes peculiarly adept at identifying formations and outcrops as he skims through the blue with his eyes critically scanning the landscape. By the appearance of the protrusions and indentations below, he can often tell that



Only in comparatively recent years have reliable methods of core orientation been developed. This is one of the machines that tell the story and help the geologist to plot the angle and direction of sub-surface stratification.

they are consolidated rock, or are hills of glacial drift. Being uninhibited by the proximity of overpowering land bodies, he can in his mind's eye trace the meandering laminations to the underground, and from his lofty perch can much more easily read the story that nature has written in earth wrinkles.

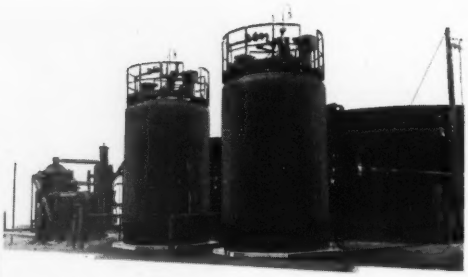
It requires a facile mind, of course, to be able to make the fullest use of aerial photography in exploration work. The geologist trains himself to see in a photograph, not a mere picture of the earth's surface, but the surface itself. He must by a process of rationalization explain to his own satisfaction the various contours and irregularities. He must be able from the exposed signs to visualize the mighty upheavals and subsidences that have thrown the earth's strata out of their normal beds. He must be able to see not only what happened on the surface, but what that happening precipitated say 15,000 feet underground.

These are the qualities in which he is assisted by the aerial camera, and by his own aerial observations. A photograph of the land's surface taken from the sky contains lots of detail that conveys real meaning to the experienced eye. Heights are estimated by comparison with known formations or more easily determinable ones, and the steroescope helps greatly to define the depths of canyons and depressions, and the extent of elevations. Even the type of growth has its relation to the land on which it is sustained, and with this, too, the geologist soon becomes familiar. So taking all these things into account, the flyer really can tell a great deal about the territory under him, and a great deal more when he has time to study his photos leisurely under the stereoscope.

Limestone and snow are quite easily recognizable from the air and have their values as determinant factors in geological analyses. Snow, for example may be a measure of height, and the rate at which drifts melt depends to some extent on the type of rocks with which they are associated. Certain species of vegetation require good drainage, and their presence may indicate a porous sandstone ridges. Others need plenty of standing moisture, and may thus account for a base of more impervious material such as shale or close-grained sandstone.

When he makes a photographic survey, the geologist takes succes-

If you need DEHYDRATION



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sive shots so that there is some overlap at the forward end and some sidelap with adjoining series. He pieces his photos all together just as they should be into a layout. On this he indicates streams, mountains and the main features, and presently he has a photographic map, more accurate than a drafted map could possibly be, at least in an inaccessible area. In his consideration of his photo map, he takes into account every morsel of available field data, because such information helps in the more accurate interpretation of the surface indications disclosed by the camera.

In the throes of deducing from its photo mosaic, the exploration department may use field glasses and view the photo from a considerable elevation, in order to facilitate the process of determining the general pattern of the geological structure. Of the topography of the area, the geologist now has a permanent record, and with his stereoscope and some new mathematical aids, he can fix locations, heights, and depths, and dimensions generally, with remarkable accuracy He may not be able to discern the geological pattern at once, but a nice thing about an aerial photo is that it is a true representation and can often save the geologist the necessity of going back over the territory to confirm some finding or idea.

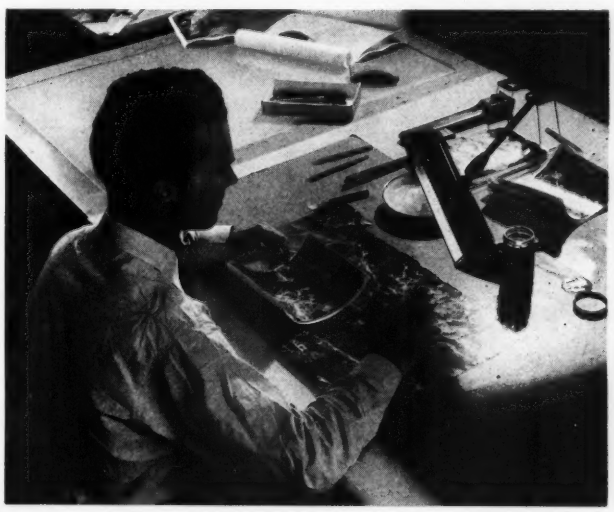
The geologist may develop several theories from the information he has at hand, but when he gets down to a detailed study of the photo map and such attendant data as he has been able to gather, these theories will usually dissipate one by one until he is left with the lone hypothesis that can stand against the evidence. He has to remember the factor of photo distortion and make proper allowance for it. Actually, its degree can be measured very precisely with an instrument known as a parallax bar, and correction can be made accordingly. The great advantage of aero-geology is that it permits the taking of photographs in areas not accessible by any other means, and that it can cover great spreads of territory in a very short time.

Photography, in conjunction with the magnetometer, either carried or trailed, tremendously speeds up geological reconnaissance. Until recently, according to a release of the Western Oil & Gas Association, "surveys have been made on the ground with instruments requiring accurate leveling on a firm base. With the older methods and under favorable conditions, a typical survey might proceed at the rate of 1½ miles a day. With the aerial magnetometer—surveys of as many as 1000 contour miles, or approximately 500 square miles a day have been carried out over inaccessible terrain."

Another wartime development of great moment is "trimetrogon" aerial photography. This is a process in which three exposures, one vertical and two oblique, are taken simultaneously with three cameras, at predetermined intervals. Each group of three pictures takes in a strip of land several hundred miles long and about 35 miles wide. This means that ordinarily, for a wide area, it is only necessary to take photographic strips 35 miles apart, as compared with 3 or 4 miles apart for the usual vertical photography. It speeds the survey greatly, and is said to show up significant features plainly enough and accurately enough to provide excellent data for geological deduction.

No discourse on oil finding would be complete without reference to two lately adopted sciences. The first, flurochemistry, takes into account the fact that under ultraviolet light, petroleum oils have a characteristic fluorescence or glow. This effect is discernible even in very dilute admixtures of oil with rotary mud or water, or when distributed in small proportions through oil cores. The ultraviolet light used for field work is a small portable unit, and it will quickly familiarize any operator with characteristic fluorescences. It can be used either qualtatively or quantitatively. For quantitative work the color quality is defined by the aid of color filters or a spectroscope, while the quantity or intensity is measured with filters of

Here a girl is making analytical examination of the air photo, to determine heights of elevations, depths of depressions, and other pertinent facts, which will be marked on the print or given to the geologist for his consideration.



This operator is in the process of piecing aerial photographs together to give a general view of the area covered by the survey.

Silver Anniversary

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specified transmission, photo-electric photometers or spectrophotometers. The first requisite of effective application is experience in the examination of petroleum in varying concentrations in a variety of media.

The other recently recognized exploration science has been given the imposing name of micropaleoichthyology. It has been utilized successfully to correlate subsurface formations through the presence or absence of fossil fish scales. Such scales have certain well defined markings that are distinctive for each kind of fish, and the various strata are classified geologically according to the abundance of specific types of scale, the scarcity of specific types, or the proportion of several types, that they may exhibit. This science is still young but it is already proving of real worth in the exploration program.

There are many other scientific and pseudo-scientific methods and devices, core orienters, for example, that are doing their part in the elevation of oil finding processes from the category of hocus pocus to that of the exact sciences. We have come a long way from the age of diviners and doodlebugs, but while much has been accomplished, much still remains to be done, and there seems little doubt that under the whip of necessity the next decade will witness great progress in geological and related sciences. With the increasing sensitivity of technical instruments to almost every known force and effect, who knows we may soon reach that exploration millenium in which direct and positive location of subsurface petroleum deposits will be an elementary assignment.

A.A.O.D.C. Announces Committees

For the benefit of those who contemplate coming to the annual convention of the American Association of Oil Well Drilling Contractors which will be held in Long Beach on October 13, 14, and 15 of this year, the following committees are listed with committee chairman and address.

Central Committee
K. L. Kellogg
K. L. Kellogg & Sons
401 Farmers & Merchants Bank Bldg.
Long Beach, California

Ned Brown
Brown Drilling Company
1456 E. Hill Street
Long Beach, California

D. H. Graham
Dunlap & Graham
2450 Cerritos Avenue
Long Beach, California

Ralph Marshall
Drilling and Exploration Co.
Route 2, Station H
15954 S. Avalon Blvd.
Los Angeles, California

Ed Simonis
Santa Maria Drilling Corporation
2875 Cherry Avenue
Long Beach, California

Housing Committee
D. H. Graham

Entertainment Committee
George McCarthy
Shamrock Drilling Company
1004 Petroleum Building
714 West Olympic Blvd.
Los Angeles, California

Finance Committee
Ralph Marshall

Program Committee
A. S. Hayes
Hayes and Sprague
710 Halliburton Building
1709 West 8th Street
Los Angeles, California

Transportation Committee
C. L. Fowler
Fowler Drilling Company
2951 Long Beach Blvd.
Long Beach, California

Banquet & Food Committee
J. E. Pettijohn
2455 W. 236th Street
Torrance, California

Registration Committee
Gene Reid
Gene Reid Drilling Company
Route 4, Box 890
Bakersfield, California

Publicity Committee
D. H. Graham

The Banquet Committee is making elaborate preparations for a banquet to be served in the convention hall of the Long Beach Municipal Auditorium for 1200 people.

A Brunch for the ladies at one of the local Country Clubs, with an "Out Of This World" fashion show, the result of which may work a hardship on some of the husbands, is also in the state of preparation by Dick Pettijohn.

Petroleum Production Pioneers Annual Barbecue Sept. 13th

Petroleum Production Pioneers, already numbering 750 members, although one of the industry's youngest organizations is now completing arrangements for a barbecue on Union Oil Company's picnic grounds, near Brea, on September 13, from 2 to 7 p.m. Chef Frank Romero, popular barbecuist, will preside over the pits, and a record turnout is again expected.

These popular gatherings bring together the outstanding pioneers of the petroleum industry in an orgy of reunion and recollection that seems to satisfy a very prevalent desire of the members. It is a pronounced characteristic of oil men that they like to consort with others of their kind, and these meetings provide an opportunity, which many of the pioneers have long sought, to meet with former associates and friends, and to reminisce under congenial and pleasant circumstances.

Although the open meetings are largely social and informal in character, the Petroleum Production Pioneers has some serious projects under way. The completion of a history of California petroleum, with particular emphasis on the human aspects, is one of the major objectives. This will be preceded by the preparation of a series of biographical sketches of the men who have been responsible for the development of the oil industry, particularly producing and related phases, on the Pacific Coast.

Six hundred members and friends journeyed to Bakersfield for the last outdoor meeting, and indications are that an even larger representation will be found at the southern division locale on September 13. It is planned, according to J. E. Gosline, President, to alternate the picnics in the San Joaquin Valley and coastal areas with those held in Los Angeles district, so that the members in these more distant parts will be able to attend at least one meeting a year without serious inconvenience.

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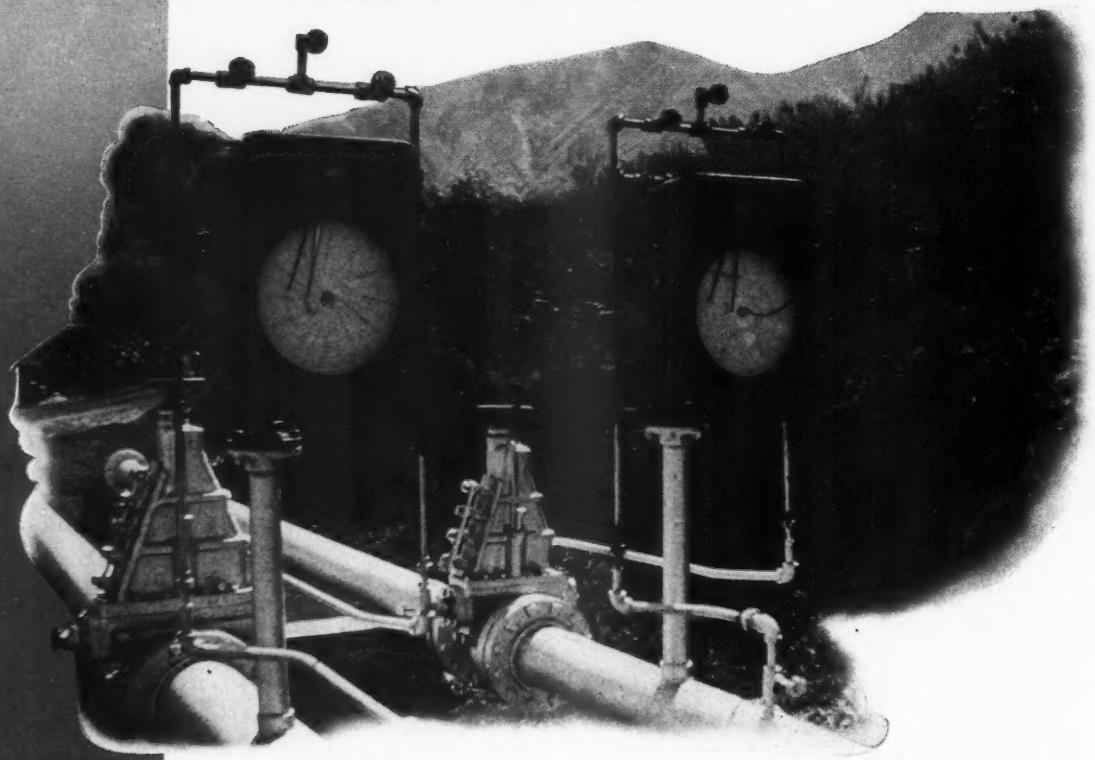

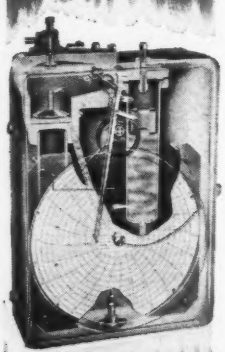

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Field Development

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Los Angeles Basin

Potrero Well Soon Starting

A new entrant in the Potrero area is Pacific Continental Oil Co., which is moving ahead with preliminaries leading to the spudding of its drilling job scheduled for Eucalyptus Ave., about 150 ft. north of Basin Oil Co.'s City of Inglewood No. 1.

Pacific Continental, headed by E. B. Rice, has made application with the city for the necessary rezoning and ready to contract the drilling. G. M. Elberson is secretary-treasurer of the company and J. A. Spray, director.

Basin Oil's project in the northwest extension of the field is gun perforating at oil showings in the interval of 9705-10,563 ft. Drilled to a depth of 10,590 ft., mostly shale and gray sand was cored from 10,563 ft. to bottom.

Macco Corp.'s Macco-Beloil Fee No. 2 in Sec. 28-2s-14w in the northwest part of the Potrero field is evidently showing much promise. Spot coring is continuing at 9853 ft., with top of the 8th Callender oil zone topped at 9440 ft. The 7th zone was reached at 8590 ft. The well is about a mile and one-half from Basin Oil's drilling effort.

Cleveland Oil Co., meantime, has cellar for its Machado No. 6A in Sec. 7-2s-15w. Macco Corp. and Ronald C. Smith have plugged back Macco-Smith No. 10 in the section and are preparing to again redrill the well, which encountered several mechanical mishaps. Original depth is 9419 ft.

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Alondra Test Running Pipe

British-American Oil Prod. Co. is preparing to run 7-in. casing in its Park Comm. No. 1 in Sec. 22-3s-14w, which was whipstocked to a depth of 9238 ft. under Alondra Park. Approximately a quarter of a mile northeast of the Bodger No. 1 producer, H. C. Christie is running 5½-in. casing to splice to 7-in. liner and cement. This move will be followed by gun perforating and higher tests. Total depth is 9351 f.t

Cleveland Oil Co.'s Gardena No. 15 is still a location in Sec. 22-3s-14w. Petrol Corp. has foundation in for School House No. 1 and cellar for No. 2.

Lawndale Job Tests

One of the Los Angeles Basin's most interesting wells, Seaboard Oil Co.'s Johnson No. 1 in Sec. 17-3s-14w in the Lawndale area, continues to test. The project went to 8026 ft., a point at which 7-in. casing was subsequently cemented. On a test already made, the well evidently blew some oil and Gas. Location for Johnson No. 2 has been made in the section.

West Newport Projects Dig

Republic Operators, Inc., continues to drill on down at 2162 ft. with Newland No. 2 in Sec. 12-6s-11w in the West Newport Beach area. In Sec. 7-6-10w, Amerada Petroleum is sidewall sampling after running electric log in Farnsworth No. 36-7, which is bottomed at 5900 ft. California Exploration Co.'s Cagney No. 1, a new well in Sec. 28-6s-10w, is pumping an average of 120 barrels of 10.5 gravity oil a day from 2511 ft. Cut is about 11 per cent.

Newhall Try Moving In

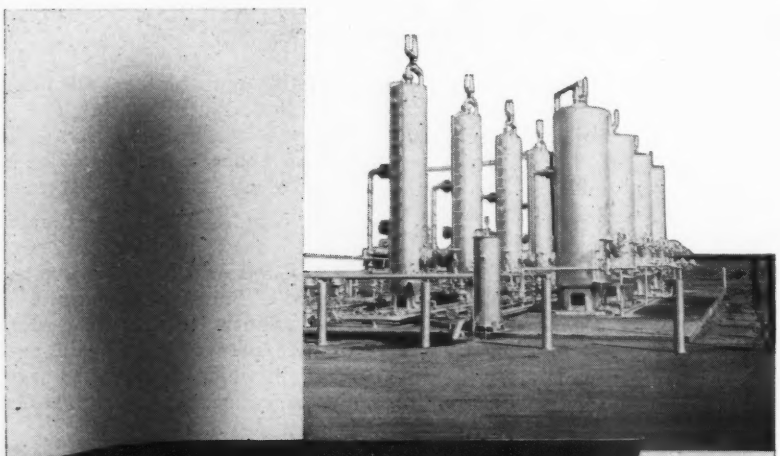
Equipment is moving to location for Mutual Development Corp.'s Lassalle No. 1 in Sec. 10-3n-16w in the Newhall area, Los Angeles County.

Los Angeles Well Starts

In the East Los Angeles area, Richfield Oil Corp. has location staked for Los Angeles River Comm. No. 1 in Sec. 34-1s-13w near the intersection of Mission Rd. and 7th St. Vail No. 3 in Sec. 16-2s-1w is drilling below 6750 ft. North Side No. 1 in Sec. 7 is making hole at 6015 ft.

Del Valle Well Flows

R. E. Havenstrite's interesting deep test in the Del Valle field, Lincoln No. 15 in Sec. 16-4n-17w, on production trial flowed by heads at the rate of 100 to 500 barrels daily of 36 gravity oil from the interval open at 10,933-11,762 ft. Cut of 20 per cent was mud and emulsion.



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San Joaquin Valley

San Emigdio Project Deep

Continental Oil Co. last was reported redrilling at 9898 ft. with KCL No. L-1 in Sec. 11-11n-22w in the San Emigdio area. No. L-2, a rig in Sec. 8-11n-21w, will be drilled on contract to Fred Manning, a newcomer to California contract drilling circles. Manning, whose headquarters are in Denver, Colo., is widely known in the Mountain States. The KCL No. M-1 in Sec. 27-11n-22w is drilling at 5718 ft.

Shale Hills Well Starts

In the Shale Hills area north of the Williams field, Mar-Roo Syndicate is making hole at 54 ft. with well No. 44 in Sec. 33-27s-19e, Kern County. Officers of the company include John H. Marion and C. M. Rood.

Fruitvale Test Scene

On a wide spread of acreage in the Fruitvale area, Superior Oil Co. and Independent Exploration Co. have joined forces to drill KCL No. A57-13 in Sec. 13-29s-27e. The try is likely to attract much interest.

McLure Valley Try Abandoned

C. C. M. O. Co.'s Orchard No. 1 test well in Sec. 25-24s-17e in the McLure Valley area of Kings County has been abandoned as a production failure at 2503 ft.

Midway-Sunset Well Starting

General Petroleum Corp. has staked location for Pacific No. 13 in Sec. 32-12n-23w near Maricopa in the Midway-Sunset area. The Company's No. 15 was recently completed at a depth of 4000 ft. in the brown shale formation for 390 barrels of 27.4 gravity oil a day through an 18/64-in. choke.

Tejon Try In Offing

Three miles northeast of production in the Tejon-Grapevine area, Western Gulf Oil Co. has staked location for Tejon Ranch No. 1 in Sec. 29-11n-18w. S. P. No. 1 in Sec. 25-12n-20w in the Sand Hills area is prospecting ahead below 14,750 ft. Di Giorgio No. 2 in Sec. 10-31s-29e near Arvin is making hole in schist at 6250 ft.

Devils Den Well Reams

S. R. DeKalb's Blake No. 16 in Sec. 25-25s-18e in the Devils Den area is reaming. Total depth is 890 ft., with 6⅝-in. casing set at 740 ft. Barnsdall Oil's Bates No. 3 in Sec. 20-25s-19e continues to stand idle at 2341 ft.

Temblor Try Plugged Back

Cal Oil and Gas Co. has plugged back from 2000 ft. to 1040 ft. in its Calumet-Cal No. 1 in Sec. 30-29s-21e in the Temblor area.

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Pyramid Hills Venture Pumps

In the Pyramid Hills area of Kings County, Cal Valley Oil Co.'s No. 13 in Sec. 17-24s-18e has been put on the pump for a yield of water and a trace of oil. Original depth is 1885 ft., with plug at 1200 ft.

Edison Test Makes Repairs

Drilling has come to a temporary halt at 4425 ft. in Caliente Oil Co.'s Cohn Estate No. 1 in Sec. 12-30s-29e in the Edison area for needed equipment repairs. Hole is bottomed in shale.

Tejon Adds New Producer

Richfield Oil Corp. has added Tejon No. A-69-35 in Sec. 35-11n-19w in the Grapevine-Tejon area. It flowed initially 105 barrels of 18.8 gravity oil, cutting 23 per cent through a 25/64-in. bean. Production last reported was 52 barrels of 18.8 gravity oil through a 21/64-in. orifice. Gas output is 350,000 cubic ft. Location for Tejon No. 59-35 is being staked.

Lost Hills Test Staked

Superior Oil Co. is ready to start work on USL No. 1, an outpost test in Sec. 18-26s-21e in the Lost Hills area.

Poso Creek Well Tests

Preparations are under way to run formation test of the interval of 1090-1160 ft. in General Drilling Co.'s Fitzhugh-USL No. 2 in Sec. 14-27s-27e in the Poso Creek area. Hole is bottomed in gray sand at 1873 ft. with plug at 1160 ft.

McKittrick Try Squeezed

Having reacted wet on water shut off test, Pacific Western Oil Corp.'s Midway-McKittrick No. A-84-30 in Sec. 30-30s-22e in the McKittrick area is standing squeezed. Total depth is 5196 ft., with casing set at 4959 ft.

Victor Exploration lost hole at 3500 ft. with No. 1 test in Sec. 32-29s-22e and is redrilling at 4473 ft. Original depth is 5562 ft.

Texas Co. is rigging Tulare-NCT One 17-28 in Sec. 28-30s-22e and Westpet-NCT One No. 26-29 in Sec. 29. No. 57-29, a recent completion, currently flows 105 barrels of 36 gravity oil a day, along with 100,000 cubic ft. of gas.

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West Coalinga Test Gives Up

With bottom of the hole in shale and gray sand at 1447 ft., Porter-Sesnon Et Al has decided to give up its Chevalier No. 1 test in Sec. 12-21s-14e at West Coalinga area.

Wheeler Ridge Project Drills

In the vicinity of the Wheeler Ridge field, discovered by Standard in 1923, Richfield Oil Corp, is drilling at 6254 ft. with KCL No. C-1 in Sec. 20-11n-20w.

Cymric Wildcat Going On Down

Rothschild-Bender Oil Operations, Sheep Springs No. 3 in Sec. 17-29s-21e in the Cymric area is drilling steadily ahead below 4800 ft.

Kettleman Hills Redrill Active

Standard of California is redrilling at 9457 ft. with No. 73-30V in Sec. 30-23s-19e in the Middle Dome area of Kettleman Hills. The project went originally to 12,389 ft. for a new Eocene discovery. Standard shares interest in the test with Bolsa Chica Oil Corp.

Standard is preparing to launch another Eocene test in the South Dome area. Known as S. F. & F. L. No. 4-2, it will drill in Sec. 12-25s-19e. This is not far north of where the company years ago explored to 5541 ft. without uncovering showings of commercial worth. The earlier well's best performance was a slight flow of oil and water.

Bacon Hills Test Digging

Drilling has reached a depth of 7623 ft. in Seaboard Oil Co.'s No. 24-21 in Sec. 21-28s-20e in the Bacon Hills area. Present formation is shale. The project formerly was called Seaboard-Bandini No. 24-21.

N. E. Coalinga Test Squeezed

Sharples Oil Corp.'s Hyde No. 2 in Sec. 6-19s-16e in the Northeast Coalinga area is standing squeezed, after testing wet on shut off at 8266 ft. Total depth is 8279 ft. in oil sand.

Ten Section Try Goes Ahead

Redrilling at 13,536 ft. is the current status of Shell Oil Co.'s KCL-A No. 53-30 in Sec. 30-30s-26e in the Ten Section field. Old bottom is 13,745 ft.

Looking Around

By THE OBSERVER

LITTLE CHUM . . . HOW YOU'VE GROWN!

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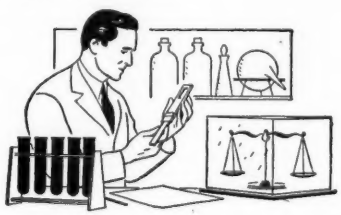

The biggest set of labs is at Richmond. About 650 people are busy there. Holding the whole group together is the headquarters staff located in San Francisco.

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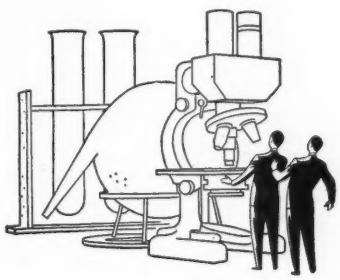

And as consultants, they're ready to dig into any technical problem that will help our customers to use petroleum products effectively.

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Coastal and Northern District

West Mountain Well Completed

The best producer so far in the West Mountain area has been completed there by Los Nietos Co. and Lucy Smith Battson with C. & H. No. 4. It came in from 5064 ft. for an initial yield of 718 barrels of 20.8 gravity oil daily, cutting 3 per cent through a 1-inch bean. Casing is set on bottom. D. D. Feldman is drilling deeper at 3010 ft. with Richardson Estate No. 5 in Sec. 23-3n-21w.

Santa Paula Try Resuming

T. M. Gibson is preparing to resume operations with Portillo No. 1 in Sec. 26-4n-21w in the Santa Paula Canyon area, Ventura County. Present depth is 185 ft.

Goleta Test Finds No Oil

Following a series of tests uphole by stages, Ohio Oil Co. is abandoning its Thomas B. Bishop Co. No. 1 in Sec. 7-4n-28w in the Goleta area. Total depth is 3241 ft.

Sespe Park Try Drills

Near Sespe Park in Ventura County, Republic Operators, Inc., is making hole below 2250 ft. with Arundell No. 6-1 in Sec. 6-4n-19w.

Montalvo Area Active

The Montalvo area of Ventura County where Standard of California some months ago found new oil is showing increased activity. Richfield Oil Corp.'s Del Cielo No. 2 in Sec. 30-2n-22w is rigging derrick. Standard's McGrath No. 65-3 in Sec. 30-2n-22w is coring at 9160 ft. Maxwell No. 1 in Sec. 23-2n-23w is spot coring at 9422 ft.

Zaca Project Drills Deeper

Tide Water Associated Oil Co. has reached the 3450-ft. level with Luton No. 71 in Sec. 32-8n-31w in the Zaca Creek area, Santa Barbara County.

Saticoy Try Rigged

Rigged up but idle is Superior Oil Co.'s No. 1 wildcat test in Sec. 10-2n-22w in the Saticoy area, Ventura County.

Orcutt Try Goes

Sunray Oil Corp., which not long ago chalked up a new discovery in the Orcutt area, is losing no time in going forward with the followup job. The present undertaking, Los Flores No. 2 in Sec. 4-8n-33w is drilling at 3567 ft. Location is on ground owned by the Los Flores Land and Oil Co. Universal Consolidated holds substantial interest in the latter concern.

Cat Canyon Well Reams

Douglas Oil Co.'s No. 12 in Sec. 22-9n-33w is reaming, with bottom at 5662 ft. No. 15, meantime, is rigging up.

Arroyo Grande Well Pumping

Adams Oil Co. has given the finishing touches to Adams No. 3 in Sec. 31-31s-13e in the Arroyo Grande field, pumping an unestimated amount of crude oil to sump. Dollie No. 9 is a location in Sec. 6.

Capitan Try Begins

Rothschild Oil Co., Santa Fe Springs, producing and marketing organization, has staked location for Orella No. 5 in Sec. 31-5n-30w near Capitan production in Santa Barbara County. The drill site is about 600 ft. northeast of the Orella No. 1 discovery well. Orella No. 2, southeast of the discovery, was abandoned just short of 4000 ft.

. . . but not when you are cementing casing in a well

That's one time to take every possible precaution, and the simplest, surest, low-cost method you can follow is to use Baker Casing Centralizers on the shoe joint, and on a joint or two above. The casing is centered in the hole so that cement slurry can get all around it, and you know the odds are with you to get a sound "first-time" cement job. Call any Baker man and he will see that you are supplied promptly with . . .

BAKER CASING CENTRALIZERS

WAX -

FINE IN CANDLES
A HEADACHE IN OIL LINES

Nobs Wax Solvent will dissolve and remove the most persistent waxes and paraffines from wells lines and traps.

NOBS DEHYDRATING CORPORATION
2465 East 53rd Street, Los Angeles 11, California

Cat Canyon Test Listed

Northwest of the Cat Canyon field, General Petroleum Corp. is starting work on Realty No. 73-10 in Sec. 10-9n-33w, Santa Barbara County. The new test is about a mile northwest of the company's previous test well, Dominion No. 41-14, which explored to 5070 ft., before abandonment a year ago.

King City Try Likely

Union Oil Co. has under consideration another well in the King City area in Monterey County near Page No. 1 in Sec. 8-22s-8e, which explored without success to 3214 ft. and was abandoned years ago. The company's Giorgio No. 1 in Sec. 12-8n-32w on wildcat ground not far from the Gato Ridge field is spot coring and drilling ahead at 1662 ft. Mary C. Phelan No. 1 in Sec. 32-12-34w in the Nipomo area is a location. Present output of the new Henderson No. 1 in Sec. 23-3n-21w in the West Mountain area is 134 barrels of 19 gravity oil daily, cutting 55 per cent.

C. D. L. Bo. No. 4 in Sec. 32-3n-18w in the Simi area of Ventura County has been finished at a redrilled depth of 1820 ft. for 33 barrels of 17.3 gravity oil a day, cutting 3.4 per cent. No. 5 is rigging up and No. 6 is grading ground.

Foxen Canyon Well Pumping

North of the Gato Ridge field, Foxen Ridge Oil Co. has completed Wickenden No. 1 in Sec. 33-9n-32w in the Foxen Canyon area at 4970 ft., pumping to sump an estimated 300 barrels gross rate daily of 9 gravity oil and water. The venture, adjacent to the Tinaquoc Ranch, was an abandoned well before taken over and carried deeper by the present operator.

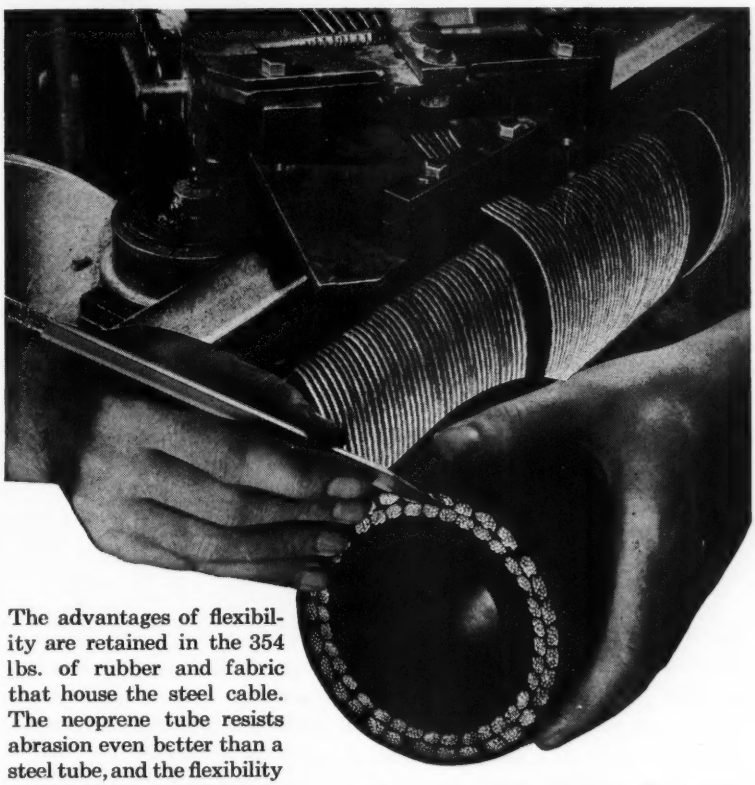
Lompoc Try Spuds

Barnsdall-Honolulu Oil Corp.'s Salsipuedes No. 1 in Sec. 8-6n-33w in the Lompoc area has been spudded and last was reported making rapid time with the drill below 1500 ft.

This "Rubber" Hose is 67% steel!

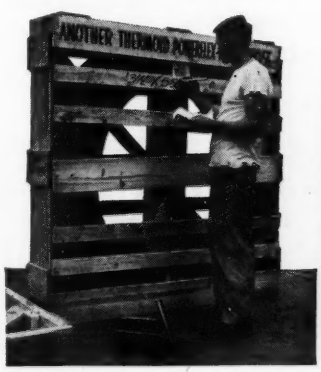
716 lbs. of steel for strength—354 lbs. of rubber and fabric for flexibility—that's the efficient make up of Thermoid Powerflex Rotary Hose, built to go "all the way" in deep hole drilling!

Thirty-three *miles* of high tensile steel wire, formed into 9300 ft. of cable, and precision wrapped—and counter-wrapped, gives each length of Thermoid Powerflex Rotary Hose strength to withstand the highest pressures that may develop under any condition.



The advantages of flexibility are retained in the 354 lbs. of rubber and fabric that house the steel cable. The neoprene tube resists abrasion even better than a steel tube, and the flexibility needed for rotary work is obtained in a single, unbroken, free-flowing length of hose.

Thermoid Powerflex Rotary Hose has the strength *of steel—and the* flexibility *of rubber!*



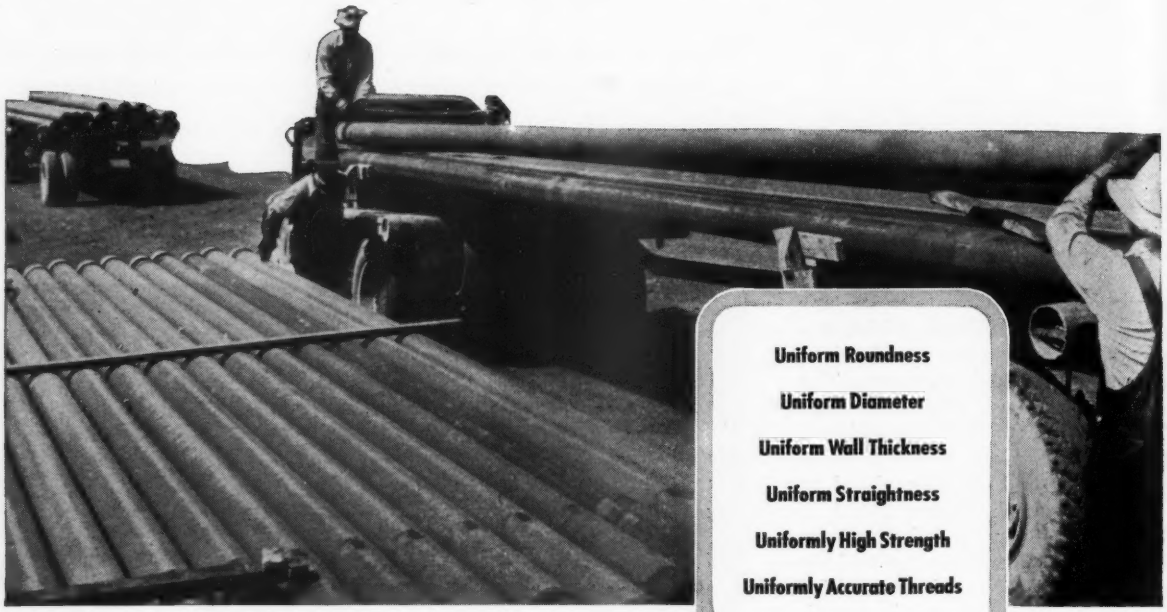
Thermoid Products

Automotive • Industrial
Oil Field • Textile

Thermoid Company, Trenton, N. J., U. S. A.

Warehouses in Houston, Los Angeles, Wabash

NEVER A MISFIT



in REPUBLIC *Electric Weld* CASING EVERY JOINT IS UNIFORM!

You'll lose no time in running strings when Republic Electric Weld Casing is delivered to your well. Each straight length is uniformly round and strong—with clean, accurate threads, uniform wall thickness and diameter. And ALL lengths are as alike as the most modern mechanical methods and skill can make them.

Straight, true lengths and uniform roundness mean absolute alignment, rapid stabbing. Clean, full threads mean quick spin-in and tong-up. Uniform thickness of tough steel at the root line of threads protects against pull-outs. Accurate size, uniform wall thickness and roundness plus the high yield point of the cold formed steel in this modern casing assure maximum resistance to collapse.

Make certain that you get ALL these casing advantages. Specify Republic Electric Weld Casing for your next well.

HOWARD SUPPLY COMPANY
INCORPORATED
5125 SANTA FE AVENUE, • LOS ANGELES, CALIFORNIA

INSPECTED INSIDE AND OUT

Republic Electric Weld Casing and Tubing are made from flat-rolled steel, both sides of which can be inspected. Thus, the surface which becomes the inside wall is free from hidden defects.

REPUBLIC *Electric Weld* **STEEL**
REG. U.S. PAT. OFF.
NORMALIZED CASING AND TUBING

Personalities IN THE NEWS

Standard Announces Advance In Manufacturing Dept.

Appointment of W. H. Hales as chief engineer of its manufacturing department was announced recently by Standard of California.

W. H. HALES

Hales, a 1923 Stanford University graduate, came to work for Standard in 1942 as a construction superintendent at the company's El Segundo refinery. Most of his service with the company since that time has been at El Segundo and at Standard's Richmond refinery. He was made chief engineer of the Richmond plant in 1943.

W. H. SPAULDING

J. O. CIPRICO

Other manufacturing department appointments also announced include those of W. H. Spaulding as assistant chief engineer, and J. O. Ciprico as designs engineer.

Spaulding started with Standard in 1938 after taking a master's degree at Massachusetts Institute of Technology. He was departmental job engineer prior to his new appointment. Ciprico has worked in various engineering capacities for the company since 1919, following graduation from the University of California.

Frank R. Seaver of Hydril fame has been appointed a member of the board of trustees of Pomona College at Pomona.

Paul Cavins, General Manager of the Cavins Co., is recuperating in Seaside Memorial Hospital, Long Beach, California, after an operation. He is to be discharged shortly and after a convalescent period will be back doing business at the same old stand.

The Ashley DeWitt Lodge at Lake Arrowhead was the mecca for friends during the oppressive weather. DeWitt, prominent oil producer, kept the welcome sign and the latch string out for anyone seeking a cool spot when temperatures were high in urban areas.

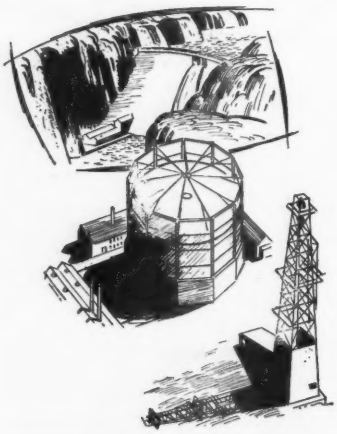
Dr. Robert A. Cornog was the principal speaker at the meeting of the California Natural Gasoline Association at the Rio Hondo Golf Club in Downey. He discussed "Nuclear Physics — Its Application in the Petroleum Industry."

Arthur F. Bridge, general manager of Southern Counties Gas Co. has been renominated chairman of the American Gas Association Laboratories Management Committee. He has served as a member of the committee since 1931, and earlier served the association as director and president.

C. J. (Cy) Morris of Union Oil Co.'s production department of Santa Fe Springs has joined the selected few among the oil fraternity which can boast a hole-in-one-shot. He made it at Rio Hondo Golf Club when he sank a No. 9 iron shot on the 130-yard No. 2 hole. The hole in question is more or less out of sight behind a knoll, surrounding the green. All a golfer can possibly do is pray, shoot for the flag and hope to land on the green.

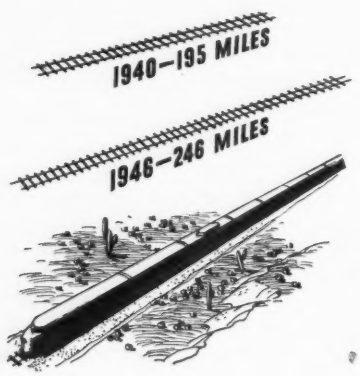
"The Pacific Coast has its problems, too"

1. Every time you light the furnace, start your car, plug in the vacuum cleaner or step into an elevator, you consume energy. And since this energy furnishes heat and power that would otherwise have to come out of your own heart and muscles, the energy a people consume is pretty important.

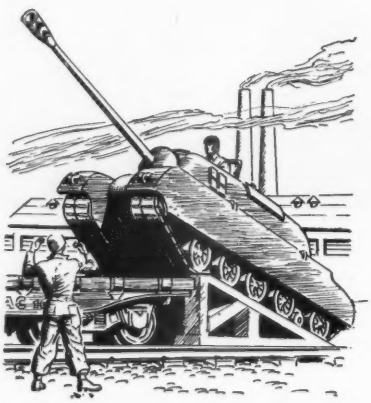


2. On the Pacific Coast our three primary sources of energy are hydroelectric power, natural gas and petroleum. During 1940, the people of Washington, Oregon and California consumed more than 1 quadrillion, 46 trillion, 396 billion B.T.U.'s of energy from these three sources.

3. That means the average Pacific Coast person consumed enough energy in one form or another during 1940 to move a 15-car streamlined Diesel passenger train 195 miles. That's quite a bit of energy. But look what's happened since. By 1946 we had more tools to help us work—more money to help us live.



4. As a result, the average Pacific Coast person in 1946 consumed enough energy to move that same train 246 miles—an increase of 26%. On top of this, our *population* increased 30%. So *more* people, each using *more* energy, increased our total consumption 64%! If times had been normal, we could have built facilities to meet this demand.



5. But during the war, very little new construction on hydroelectric plants, steam plants, pipe lines, etc., was allowed. Consequently the Western oil industry has had to produce more petroleum *this year* than during *the peak years of the war.* And the Western utility companies have been scraping the bottom of the barrel.

6. So far, we've made out. In fact, we've increased the energy output on the Coast over 64% in 7 years—largely because our free, competitive American system has given all of us the *incentive* to increase that output. But our situation is typical of dislocations brought on all over this country by the war. These dislocations are no one's fault. But it is going to take the American people some time and some patience to work them out.

UNION OIL COMPANY

OF CALIFORNIA

INCORPORATED IN CALIFORNIA, OCTOBER 17, 1890

This series, sponsored by the people of Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Building, Los Angeles 14, California.

AMERICA'S *FIFTH* FREEDOM IS FREE ENTERPRISE

R. M. Bolieau Appointed California Representative for Rector Well Equipment Co.

Mr. L. L. Rector, president of Rector Well Equipment Company has announced the appointment of Mr. R. M. Bolieau as their California representative with headquarters in Tulare, California. Mr. Bolieau entered the oil business in 1928 with Axelson Machine Company. For the past 19 years he has been Mid-Continent and Rocky Mountain representative for the D&B Division of Emsco Derrick and Equipment Company.

Thad Wakeman has returned to his duties with Southern Counties Gas Co. at Santa Monica, following a vacation trip with his family to Bryce and Zion Canyons. In addition to a stop at all the scenic spots, Wakeman found time to do some fishing in Idaho.

Mary Desmond of the Oil Producers Agency in Los Angeles is on vacation in the Pacific Northwest. Friends have received cards from beautiful Timberline Lodge on Mount Hood, where Miss Desmond visited several days on her tour.

Election of Harry A. Jackson, San Francisco, as new president of the Seaside Oil Co., was announced in Santa Barbara by the board of directors. R. J. Irvine, also of the Bay City, becomes vice president and sales manager. Both will reside in Santa Barbara.

The board also elected G. C. Howell, secretary, H. L. Harms, treasurer, and G. D. McPhee, assistant secretary.

Kenneth M. Alviso, Shell Oil Co. in the Bakersfield area, entered his horse "Tat" in the Pacific Coast Quarter Horse Association show in Los Angeles and won top honors. "Tat" was adjudged best of the model geldings of all ages.

Bill Murphy, assistant to Bob Roberts, public relations chief for Standard of California in Los Angeles, plans to return to his desk August 18 from his annual vacation.

Page Oil Tools Building New Plant

Page Oil Tools, Inc., a California corporation, was incorporated on May 13, 1944. Officers of the corporation are John S. Page, President; David P. Sickel, Secretary Treasurer. Directors include Mr. Page, Mr. Lease and Julian A. Ritch.

JOHN S. PAGE

Mr Page, oil tool inventor, has been associated with the oil industry for the past 25 years in varied capacities both in development and production. His oil field career first started in 1922 for the Shell Oil Company at Signal Hill, and was later employed by the Milham Exploration Company as a driller on the Elliott #1, discovery well at Kettleman Hills. He was more recently engaged in production work with the Richfield Oil Corporation. Mr. Lease was formerly employed by the Richfield Oil Corporation. Mr. Sickel was formerly with the E. B. Hall and Co. at the Wilmington field.

Ground is now being broken for the erection of a new plant and office building located at 3356 Lime Avenue, Long Beach, California, which will include general offices, drafting and sales display rooms, and a modern machine and assembly shop fully equipped with the latest designed lathes and milling machinery.

Page Oil Tools manufactures Tension-type Tubing Anchor, "Tension" Tubing Drain, Bottom Hole Separator, Rotary Bottom Hole Packer, On and Off Attachment and a Down Squeeze Packer.

R. J. Eiche is the foreign export representative.

Behrhorst Named Calif. Representative for American Iron

W. F. (Bill) Behrhorst, who for several years has been district representative in Kansas for American Iron & Machine Works Co., has been transferred to California district. He will headquarter in Bakersfield.

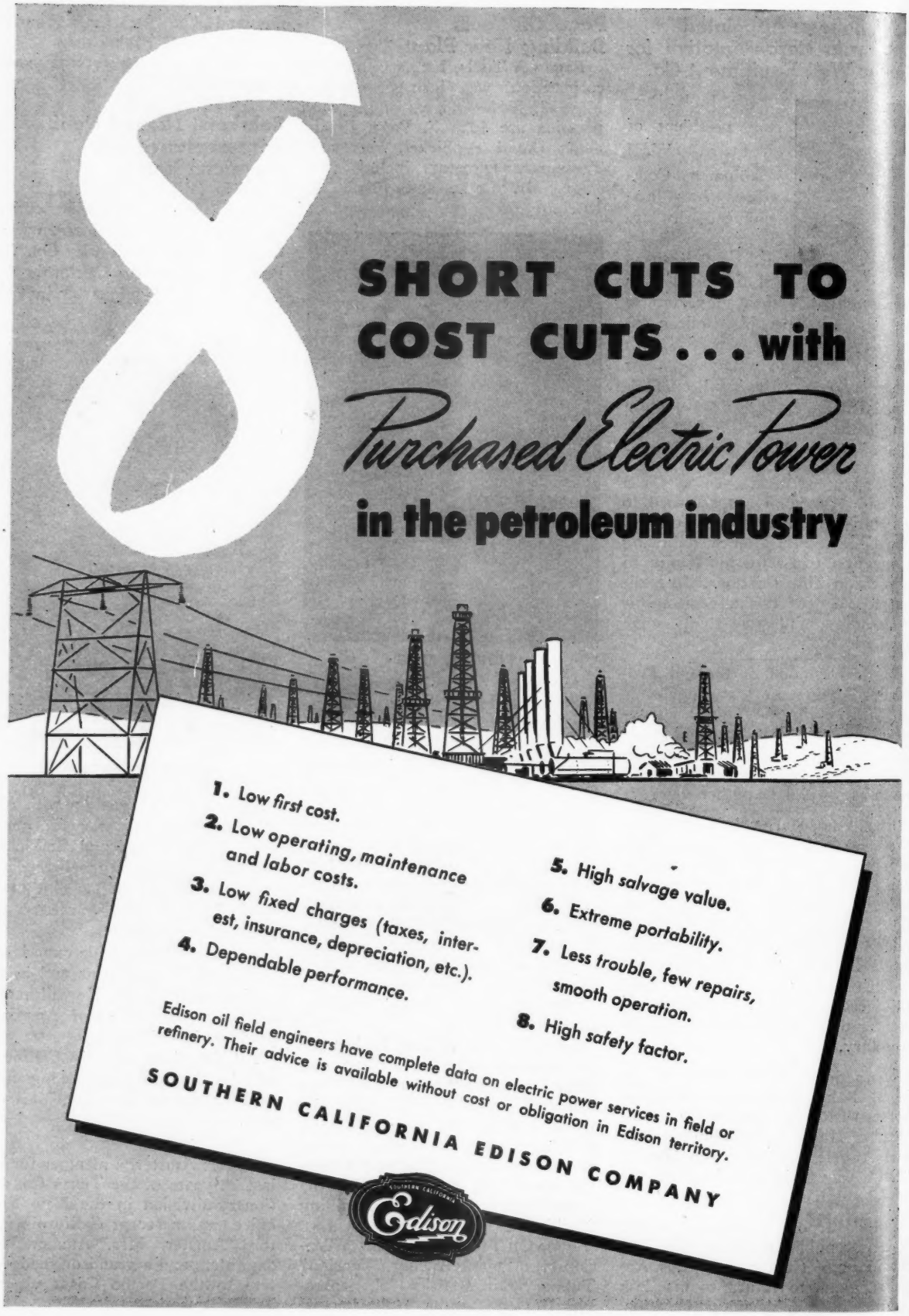
W. F. BEHRHORST

Prior to his connection with American, Behrhorst was for many years with Oilwell and Bethlehem Supply Company, in machinery and sucker rod sales. Prior to that he worked for several contractors and production companies.

Behrhorst has a wide experience, both in field operations and in the equipment business. He will handle all sales and service of American products in California.

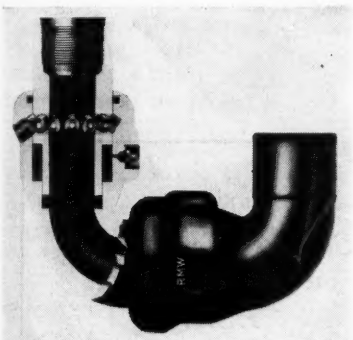
All American sales in California will be through supply companies, as they are in the Mid-Continent area.

Morris Amster, a member for the last 28 years of the Texas Co. stationery division in the New York office, was a recent California visitor. Amster, Mrs. Amster, two daughters and a grandson made the trip to the Pacific Coast via the Texaco gasoline route.


SHORT CUTS TO
COST CUTS... with
Purchased Electric Power
in the petroleum industry
1. Low first cost.
2. Low operating, maintenance and labor costs.
3. Low fixed charges (taxes, interest, insurance, depreciation, etc.).
4. Dependable performance.
5. High salvage value.
6. Extreme portability.
7. Less trouble, few repairs, smooth operation.
8. High safety factor.
Edison oil field engineers have complete data on electric power services in field or refinery. Their advice is available without cost or obligation in Edison territory.
SOUTHERN CALIFORNIA EDISON COMPANY
Edison

Roofe Introduces New High Pressure Swivel Joints

The Roofe Machine Works, Inc. of Houston, Texas has developed a new High Pressure Swivel Joint applicable to all phases of the Refining Industry. This joint can be used on oil lines, gas or gasoline lines, waterlines, acid lines, loading docks, loading racks, on hot oil lines not to exceed the temperature of 600 degrees F. or such other places where a safety swivel is required.



Simplicity of design is a feature of this joint as there are no locking rings or bolts and no adjustments to be made. No special tools are needed for the replacement of parts.

The Roofe Swivel Joint will swivel by hand at 50% of the working pressure and rotates 360 degrees. High temperature, high pressure Chevron Packing, especially designed for the Roofe Swivel Joint, is used throughout.

Roller bearings are flat with the outer surface slightly oval for clearance in the roller races. Line contact—Greater working surface.

A special designed packing chamber permits the lubricant to lift the lips of the packing the instant the pressure is applied. This feature prevents, to a minimum, the possibility of leakage at any point.

A gasket between the male and female members, at the extreme inside end of the male member, serves to resist abrasion caused by the turbulence of fluid, drilling mud or cement, passing through the joint at this point.

Joints are being manufactured in sizes 1" to 4" inclusive, with a choice of style to meet requirements. Connections are high pressure, threaded to A.P.I. high pressure specifications; bored for welding or flanged to meet requirements. High pressure grease fittings, Alemite or Zerk.

The Roofe Medium Pressure Swivel Joint has all the basic features of the High Pressure Joint and is rated 0 to 5,000 P.S.I. working pressure with a test of 8,000 P.S.I.

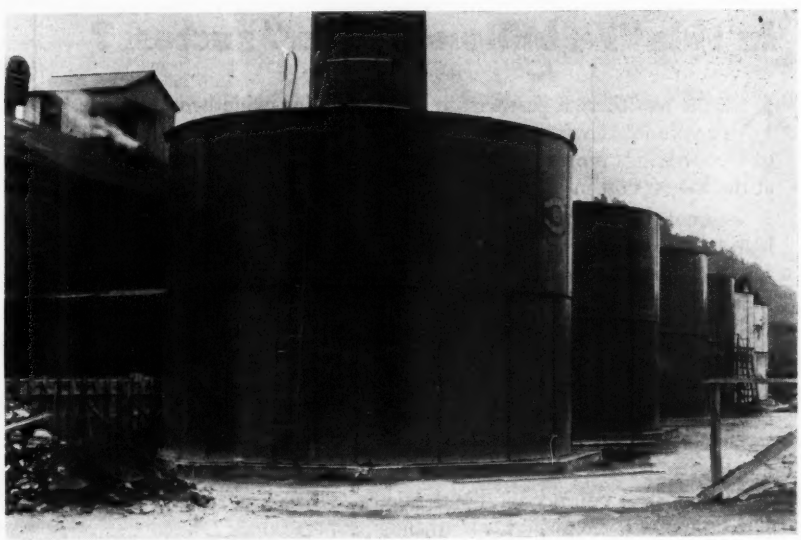
Manufactured by the Roofe Machine Works, Inc., Houston, Texas.

Meyercord Issues Complete Manual

The first complete manual on truck decal advertising ever published, a full-color brochure entitled "Ads on Wheels," is now available after months of research and preparation for use by truck fleet owners, operators and advertisers.

Copies may be obtained free by writing to The Meyercord Co., decalcomania manufacturers, 5323 W. Lake St., Chicago 44. (Or to The Meyercord Co., 4500 District Blvd., Los Angeles 11.)

Meyercord spokesmen described "Ads on Wheels" as a practical handbook of profitable ideas in truck advertising for fleet owners, public carriers, equipment makers, merchants, maintenance men and advertising agencies. With 130 illustrations, its colorful pages dramatize how the nation's top advertis-



The National Supply Company's Spang-Chalfant Division pipe mill in Etna, Pennsylvania, was shut down completely for 32 full days of 24 hours each in the three months of last January, February and March because of the natural gas shortage. This loss, together with curtailed production on other days for the same reason, cost the company exactly one-half of its normal production of pipe for the three-month period.

This cannot happen next winter because National Supply has constructed six oil storage tanks and already has them filled with 270,000 gallons of fuel oil. This amount is equivalent to 36 million cubic feet of natural gas. A concrete dyke, divided into three compartments, was built around the six tanks to confine the oil to a restricted and safe area in event of a leak.

ARE YOU STILL AN ACTIVE PARTNER...

in this "7½ billion-a-year" success?

NEVER was there a partnership like the nation-wide brotherhood of volunteers who have helped sell, advertise, and promote sales of U. S. Savings Bonds! Their program is the greatest sales operation at the lowest cost in history.

Your continued support in promoting the Payroll Savings Plan will help "America's partnership" this year to repeat or surpass last year's four-star performance, in which sales of Savings Bonds were 7½ billion dollars—*exceeding redemptions by far more than a billion!*

So keep up the splendid work—keep on telling and selling your employees the advantages of Payroll Savings: (1) ease; (2) regularity; (3) safety of investment; (4) security for the individual and the nation; (5) $4 for every $3 at maturity! And, remember, people with a stake in the future are the most stable, most productive employees.

For any help you need in conducting the Plan, call on your State Director of the Treasury Department's Savings Bonds Division.

New Savings Bonds Plan won't affect the P.S.P.

THE Treasury Department and the banks of America are making it possible for farmers, doctors, and other self-employed people to participate in "automatic" Bond buying by special arrangement with their banks. This extension of the Savings Bonds program is not a partial payment plan and is intended *only* for people who are not in a position to take advantage of the Payroll Savings Plan.

The Treasury Department acknowledges with appreciation the publication of this message by

CALIFORNIA OIL WORLD

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

ers use trucks as "mobile billboards" cashing in on the free display area of truck panels. The brochure also calls attention to the many effective display areas on trucks that frequently escape advertisers—fenders, visors, roofs and doors.

A method of determining the effectiveness of truck advertising by a "Brand Mile Rating" is a feature of the booklet. After two variable factors are established—traffic density and inherent attention value of the truck sign—the "Brand Mile Rating" for any truck ad can be measured.

Special emphasis has been placed on the demonstration of effective and successful advertising ideas throughout the publication. Illustrations of actual truck decals show by example the interesting and varied use of brand names, trademarks, product illustrations and other advertising messages on truck fleets of every description.

Bethlehem Opens Two Additional Field Stores

With a gala "Open House" Bethlehem Supply Company of California announced the opening of their newest field store. This new store, known as the Wilmington field store, is located at 1605 Santa Fe Avenue in Long Beach and will serve the drilling and refining phases of the petroleum industry in the harbor area.

The opening of this new store follows by only two months the opening of the greatly enlarged and modern Bakersfield store where a "highly successful" open house was held in late May. Leading drillers, refiners, and industry representatives of the San Joaquin Valley were present.

This expansion of facilities to better serve the petroleum industry in California is a part of the expression of confidence of the company, now in its twenty-fifth year, in the future of the industry locally.

Exterior view of the new field store of Bethlehem Supply Company of California at Bakersfield.

Exterior view of the new Wilmington field store located at 1605 Santa Fe Avenue, Long Beach. This store will serve the production and refining activities in the harbor area.

In the past when new fields were discovered and developed, the company, then known as Petroleum Equipment Company, was among the first to establish new stores. Today, with the new Wilmington field store, Bethlehem Supply Company operates 10 field stores located in the major California oil fields in addition to offices and warehouses in Los Angeles and San Francisco.

Glenn E. Pitts, Manager of Field Stores, emphasizes a point (sales no doubt) to Roger Brown, San Joaquin Division Manager, during Open House at the new Bakersfield store.

New York Office Change by Baker Oil Tools, Inc.

The New York export office of Baker Oil Tools, Inc., is now located at 11 West 42nd Street, Rm. 2640, New York City 18, New York. Telephone: Longacre 5-6880, Extension 15, with Russ. V. McIntire in charge as New York Export manager.

Other export offices are maintained in both Houston and Los Angeles.

Pictured above is the T & T Drilling Company rig at Mist, Oregon. The T & T Drilling Company of Yorba Linda, California, recently completed this test hole for The Texas Company. The well was drilled to a depth of 8,501 feet in a total of 182 days.

Crissman Drilling and Inskeep Form Arrangement

Crissman Drilling Co., and W. D. Inskeep, both Licensed Drilling Contractors and members of the American Association of Oilwell Drilling Contractors, have formed an arrangement whereby Mr. Inskeep will act as Contract Agent, and Mr. Crissman will supervise all field operations for the Company. They will maintain offices at 615 East Willow Street, Long Beach, California, telephone 436-11.

Their No. 1 rig, a seventy foot Bender-McCarthy mast unit, was acquired new by Mr. Crissman from Bender Drilling Company in 1944, following a long and satisfying drilling career enjoyed by him in the California fields. He has since operated it with great success both in the San Joaquin Valley and the L. A. Basin, completing wells over a depth range of from 1500 to 4500 feet.

Mr. Inskeep has had an equally long career in the California oil fields, the last two of which were spent as oil field service coordinator for Eastman Oil Well Survey Company handling their large California directional drilling accounts.

Crissman Drilling Co. hopes to thus be able to render an even greater service to its customer friends by this division of effort, and to be logically prepared for growth and expansion.

AIME Junior Section June Meeting

The June meeting of the AIME was held at the Rio Hondo Country Club, and the guest speakers were Mr. Paul Bowen and Mr. Dante Siracusa, their subject being, "Fishing Tools."

The speakers were introduced by acting chairman, Ray Elner. Mr. Bowen described the fishing tool industry as the "Doctors" of the oil fields rather than the "Undertakers" of the oil fields as they have been called. He touched on some of the causes of fishing jobs in rotary drilling such as drill stem failures, poor mud control and carelessness. He briefly described the operation of fishing jars, using a small model for demonstration.

Mr. Bowen introduced Mr. Siracusa who described the evolution of the overshot from the first die collars to the present circulating and releasing multi-bowl type. Mr. Siracusa also described the spear and its development from the first tapered top to the modern circulating and releasing types. He pointed out that spears cannot be made as strong as overshots since they must of necessity be made of small cross sectional areas.

Mr. Siracusa emphasized the fact that if more attention were given to fishing clearances when wells are in the planning stages, the fishing tool companies could provide a more satisfactory service to the industry.

The speakers provided several models of jars, overshots and spears which were inspected by the members after the meeting was adjourned.

Athens Try Pumping Oil

Shell Oil Co.'s Union-Poindexter No. 1 in Sec. 12-3s-14w northwest of the Athens field currently is pumping 122 barrels of 30.7 gravity oil daily, cutting 3.7 per cent. Gas yielded is 60,000 cubic ft. Plugged depth is 8731 ft. and old bottom, 9272 ft.

Temblor Try Drills

Signal Oil & Gas Co. is drilling at 2691 ft. with Signal-Westates No. 88 in Sec. 35-29s-20e in the Temblor area of Kern County. A core at 2399-2409 ft. recovered 7 ft. of dark gray shale.

On the McDonald Anticline, Signal-Honolulu-Carpenter No. 2 in Sec. 6-28s-19e is grading location.

THIS LAUGH OFF!!

A pair of newlyweds had tipped the porter generously on boarding the train to keep that fact a secret. The next morning, noticing many knowing looks cast in their direction, the angry groom called the porter to account for his treachery.

"Lawdy, boss," he replied, "I didn't tell 'em; they asked me if you was jus' married and I sez no, they're jus' very good friends."

"I hear you've been to a school for stuttering. Did it help you?"

"Peter Piper picked a peck of pickled peppers."

"Wonderful!"

"Yep, but it's d-d-darned hard to w-w-work into an ordinary c-c-c-conversation."

Professor of Economics: "You boys of today want to make too much money. Why, do you know what I was getting when I got married?"

Voice from Rear: "No, and I'll bet you didn't either."

"Why did you pick out such a pretty cook?"

"My husband is away a great deal and I wanted to have police protection."

Perhaps you think our jokes bad,
But you'd change your views,
If you'd compare the jokes we print
With those we couldn't use.

Of all the surprises, there's nothing to compare
With treading in the darkness on a step that isn't there.

First wife: "'Does your husband talk in his sleep?"

Second wife: "No, and it's terribly exasperating. He merely grins."

A fisherman found a snake with a frog in its mouth. Frog is pretty good bait, so he got a forked stick, fastened the snake's head to the ground and helped himself to the frog. The snake seemed much depressed to lose the frog, so he consoled the reptile with a shot or two of whiskey. The snake seemed pleased, wriggled its tail and undulated away.

The fisherman thereupon baited his hook with the frog and sat down to await a bite. A while later he felt something knocking against his leg. The snake was back again, tapping the fisherman's leg with its tail to attract attention. In the snake's mouth was another frog.

Elderly Patient: "As we have known each other so long, doctor, I do not intend to insult you by paying my bill. But I have left you a handsome legacy in my will."

Doctor: "That's very kind of you, I'm sure. By the way, just let me have the prescription again. There's a slight change I want to make in it."

Kissing will definitely not shorten one's life, but it does make time pass more quickly.

He: "My boss said I was a young man who would go far."

She: "You're going just so far—no matter what your boss said."

Shopper: "I want some nice, big apples for my sick husband. Do you know whether they have been sprayed with poison?"

Clerk: "No, ma'am . . . you have to get that at the drug store."

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G. E. Launches New Program for Greater Oil-Field Electrification

A program designed to help meet the growing demand for oil by pointing up the opportunities and over-all benefits of electric power in the production and pipe-line transportation of oil has been launched by the General Electric Company. Showings of the program, which features a striking 30-minute color movie with sound, are taking place in principal oil producing centers throughout the country. Audiences include oil-field and pipeline operators, petroleum associations, technical societies, engineering colleges and vocational schools, and service clubs.

In releasing its oil-field electrification program, General Electric pointed out that economists estimate that by 1965 the U.S. will consume almost six million barrels of oil per day—a 50 per cent increase over 1939 production. Authorities agree that reserves must be established in the near future to support a sustained daily production of 5,-100,000 barrels, of which some 4,-700,000 will be crude and the remainder natural gasoline and condensate. This amount is greater than production during any war year, and will require bringing in about 37,000 new wells each year.

"Electric power can effect improvements in these operations in many ways," said W. A. Wirene, manager of G-E's Industrial Materials Division, "and our oil-field electrification program has been prepared as an easily used means of demonstrating them."

This new oil-field electrification program is the latest release in G.E.'s "More Power to America" program, which provides information and material for co-operative promotion by logically interested groups of more efficient use of electric power and increased productivity. The oil program is designed for use by electric utilities, machinery and equipment manufacturers, electrical contractors, drilling contractors, distributors and supply houses, consulting engineers, government agencies interested in oil production, and petroleum associations.

A 109-page application textbook covering electrical equipment and methods in the oil-producing and pipe-line industries is made available as part of the program. This publication was prepared with the help of oil companies, electric utility companies, equipment manufacturers, and electrical engineers.

The oil program is made available at cost to co-operating groups in the form of a kit consisting of the 16-mm movie, three copies of the application textbook, and 25 copies of a publication for handout to audiences seeing the film.

The Why of Oil's Public Relations Program

The progressive public relations program which is being developed on a nation-wide "grass roots" basis under the supervision of District Committees and with the assistance of the Operating Committee and a professional staff of Public Relations men is the result of nearly two years of study, planning and organization. It is based on careful analysis and interpretation of one of the most comprehensive public opinion surveys ever undertaken to determine the public position of a major American industry. This survey isolates and charts the areas of ignorance and the areas of misunderstanding of the oil business.

The petroleum industry faces three outstandingly critical problems. These problems stem from the erroneous public impression 1) that there are only a few companies, instead of thousands and the oil industry is a monopoly lacking competition; 2) that companies "get together" to fix prices without regard for the public interest, rather than through open competition, and 3) that the industry holds back new developments, thus ignoring the many ways in which petroleum has contributed to higher standards of living.

Utilizing these and other specific survey findings, oil industry public relations executives, working with independent public relations counsel, have projected, on behalf of the entire industry, a long-range program whose basic objective is to establish the progressive character of the industry.

Launched in Chicago, in November, 1946, the program is being developed through industry-wide organization encompassing all interests, large and small, throughout the country. Their activities take the form of an intensive field campaign and a comprehensive informational service such as will reach not only into all segments of the industry but to men and women locally and nationally who influence the thinking of other people.

Actual operation of the program in the field is under the direction of District Committees. Their efforts are coordinated through the national Public Relations Operating Committee. Membership of this committee embraces the public relations executives of the industry. Most members of this committee were on the Advisory Subcommittee on Public Relations which planned and submitted the program for adoption. Reconstitution with authority to act was effected at the December, 1946 meeting.

While the groups mentioned help guide the operation of the program, their efforts can have little success if they do not receive the active support of all who today are contributing to the greatness of the petroleum industry. The individual efforts of independent dealers, jobbers or tank truck operators combined with the efforts of producers and refiners, large and small, can make a tremendous impact upon the public's consciousness in getting across the true facts about petroleum. All segments of the industry are therefore invited—urged—to take part in this program.

San Ardo Try Fails

North American Cons. and Jergins Oil Co.'s Rosenberg No. 1 in Sec. 34-22s-10e in the San Ardo area, Monterey County, has been given up at 2500 feet in granite, which was topped at 2462 ft. On formation test of the tarry oil zone at 2195-2228 ft., recovery was made up of 260 ft. of muddy water with spots of oil. Texas Co. is making hole below 2100 ft. in Orradre No. 1 in Sec. 31-23s-11e near Los Lobos.